

APPENDIX A

Correspondence



United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. BOX 2676
VERO BEACH, FLORIDA 32961-2676

November 18, 1997

Colonel Joe Miller
District Commander, Jacksonville District
U.S. Army Corps of Engineers
400 West Bay Street
Jacksonville, Florida 32232

Dear Colonel Miller:

At the October 1, 1997, meeting of the Southern Everglades Restoration Alliance, I agreed to provide the U.S. Army Corps of Engineers (COE) with a letter summarizing the actions the U.S. Fish and Wildlife Service (FWS) believes needs to be taken by the COE between now and March 1, 1998, to move towards resolving problems between present water management strategies and the endangered Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*). This letter provides that summary. Because so much has occurred on this issue between October 1995 and now, we are also providing you with a brief overview of the background behind Test 7 of the Experimental Program of Water Deliveries to Everglades National Park and the endangered Cape Sable seaside sparrow.

Background

On October 27, 1995, the U.S. Fish and Wildlife Service (FWS) completed a biological opinion for Test Iteration 7 of the Experimental Program of Water Deliveries to Everglades National Park. A complete administrative record of this consultation is on file in the FWS' South Florida Ecosystem Office in Vero Beach, Florida. The Test 7 biological opinion was based on information provided by the U.S. Army Corps of Engineers (COE), Everglades National Park (ENP), Florida Game and Fresh Water Fish Commission (GFC), information available in our files on the Experimental Program of Water Deliveries to Everglades National Park, previous biological opinions prepared for similar actions in the action area, and other published and unpublished sources of information. The biological opinion concluded that Test 7, as proposed, was likely to jeopardize the Cape Sable seaside sparrow. A reasonable and prudent alternative was developed to avoid the likelihood of jeopardizing the species' continued existence and to reduce the potential for Test 7 to destroy or adversely modify its critical habitat. One element of the reasonable and prudent alternative required the COE to develop a plan to identify remedial actions and management interventions that must be taken if the status of the Cape Sable seaside sparrow population declines during Test 7. The reasonable and prudent alternative specifically stated,

"The COE, with the cooperation of the FWS, NPS, SFWMD, and the GFC, should develop a plan that identifies remedial actions and management interventions that could be taken if the status of the Cape Sable seaside sparrow population declines during Test 7. This plan should be developed by January 31, 1996, and should identify interim actions (such as prescribed burning) that could improve the stability of the Cape Sable seaside sparrow."

On March 4, 1996, representatives from the South Florida Water Management District (SFWMD), COE, Big Cypress National Preserve (BICY), and FWS met to discuss the reasonable and prudent alternative

that was included in the biological opinion. This re-evaluation was conducted in response to the February 28, 1996, letter from the Natural Resources Defense Council (NRDC) which argued that the reasonable and prudent alternative included in the biological opinion would not help the Cape Sable seaside sparrow. NRDC's position resulted from information provided in a February 27, 1996, report prepared for the National Park Service which analyzed the hydrologic conditions in western Shark River Slough; this report concluded that the actions necessary to provide relief to the sparrow west of Shark River Slough included moving flows through the S-333 and into northeast Shark River Slough, modifying the L-67A, L-67C, and L-29 levees between L-67A and L-30 (to move water from WCA 3A to WCA 3B and into northeast Shark River Slough), and partial or total removal of the L-67-Extension levee. The meeting began with an overview of the conditions in the southern Everglades, including water levels within the marsh to the west of Shark River Slough. The group agreed that two goals for managing water levels in the marl prairies west of western Shark River Slough were (1) lowering surface water levels in the area as quickly as possible, and (2) keeping the area dry during the breeding season (dry season) of the Cape Sable seaside sparrow.

During the meeting, the group identified and discussed options that could achieve these goals which resulted in a recommendation to close structures S-343A, S-343B, S-344, S-12A and S-12B, and route excess flows through S-333. The alternatives proposed in the February 27, 1996, National Park Service Report were not discussed. It was agreed that the FWS and ENP would monitor the results of the Cape Sable seaside sparrow studies for Test 7 and the SFWMD and COE would carefully monitor the hydrologic conditions during the nesting season. If either monitoring program showed evidence that water levels in the marl prairies west of Shark River Slough were too high, a meeting would be convened to determine the appropriate response.

On March 14, 1996, a conference call occurred with representatives from SFWMD, COE, BICY, ENP and FWS. The purpose of the call was to follow up on the prior week's meeting and to discuss any additional new information in association with the management of the S-12 structures and the closing of the S-344 and S-343A and B. As a result of the conference call, a decision was reached to close structures S-12C and S-12D and to put all flows through the S-333. The structures were closed on 15 March 1996.

On April 9, 1996, the FWS convened a meeting to discuss remedial actions available if the status of the Cape Sable seaside sparrow continues to decline during Test 7. Participants included representatives from ENP, SFWMD, GFC, COE, University of Tennessee, and FWS. Dr. Pimm (University of Tennessee) argued that approximately 30 square kilometers of prairie with less than 10 centimeters of surface water needed to be available to the birds for breeding by early March. Mr. J.C. Ogden reported that, according to March airboat surveys in traditional nesting areas, greater than 30 square kilometers of marsh with less than 10 centimeters of surface water was available.

While identifying the conditions necessary for successful breeding and the possible scenarios that might be encountered, the group failed to reach consensus on how to produce such conditions. Therefore, the FWS, in cooperation with the SFWMD, generated a list of water management measures to consider under each scenario. These options included degrading the L-67 Extension, closing all the culverts at S-343A, S-343B, and S-344, reducing or eliminating flows through the S-12s and routing increased flows through the S-333, moving water normally going into Water Conservation Area 3A to the east through the Miami Canal and L-30, resuming the pilot test for L-67A and C Levees, and reducing flows destined for Water Conservation Area One and Water Conservation Area 2A by moving water to the east.

The options listed by FWS and the SFWMD were presented for comment at the FWS Multi-Species Recovery Team meeting for the Cape Sable seaside sparrow in April, 1996. Meeting participants discussed the options and agreed that options resulting in decreased flows into Cape Sable seaside sparrow habitat west of Shark River Slough deserved serious consideration.

On October 6, 1996, the FWS distributed a first draft of the Cape Sable seaside sparrow Remedial Action Plan (RAP) for review. We received comments from SFWMD, COE, ENP, and GFC. The final set of comments were received March 1997, were reviewed by my staff and were incorporated, where possible, into a final draft. On May 21, 1997, we distributed the final draft of the RAP for review. In the transmittal letter we asked Dr. Jon Moulding of your staff to coordinate the final comments and finalize the document. We made this request because the language in the biological opinion identified the COE as the preparer and "owner" of the document.

On August 20, 1997, Dr. Moulding coordinated a meeting of the review agencies to discuss the final comments and to finalize the RAP. All review agencies were represented and each of the actions identified in the RAP was discussed until consensus was reached. Dr. Moulding of your staff and Melanie Steinkamp of my staff recorded the recommended changes and incorporated them into a new version of the document; we have attached the text of this new version to this letter for your information.

The newest version of the RAP includes actions we believe are necessary to reduce the likelihood of jeopardizing the continued existence of the sparrow during Test 7. These actions were developed using the most recent and best scientific and commercial information available on the Cape Sable seaside sparrow population and its habitat. The actions are divided into those that should be implemented immediately and whose purpose is to lay the groundwork for future actions (category one actions) and those that should be implemented if the status of the species declines during Test 7 (category two actions). These actions include but are not limited to the following:

Category One Actions:

- On an annual basis, in response to localized conditions on the breeding habitat west of Shark River Slough, the COE and SFWMD, in cooperation with NPS, FWS, and GFC, should determine the appropriate operating criteria for Structures S-343A, S-343B, S-344, S-12A, and S-12B, based on water levels in the marl prairies west of Shark River Slough as delineated in Figure Two of the RAP, the conditions in Water Conservation Area 3A, and conditions in Big Cypress National Preserve.
- The COE, in cooperation with SFWMD, NPS, FWS, and GFC, should change the regulation schedule of WCA 3A to result in total deliveries to Shark River Slough that correspond to a rainfall-delivery schedule and minimize regulatory releases. This may require moving water to the east through the Miami Canal and the L-30. It may also result in a re-evaluation of the regulation schedule for Water Conservation Area 2, Loxahatchee National Wildlife Refuge, and Lake Okeechobee, to reduce deliveries going into WCA 3A.
- The COE should document the existing authorized levels of flood protection within the 8.5 Square Mile Area (8.5 SMA).
- The COE should evaluate the relationships between the operating criteria for Angel's Well, S-333, and G-3273.
- The COE and SFWMD, in cooperation with NPS, FWS, and GFC, should identify other emergency actions that may be taken for Cape Sable seaside sparrows.

Category Two Actions

- The COE should gap the L-67 Extension levee and plug the borrow canal, or completely remove the levee and fill the borrow canal.
- The COE and SFWMD, in cooperation with NPS, FWS, and GFC, should implement the appropriate operational schedules, based on the findings of the above category one actions.

At the August 20, 1997, meeting, your staff and legal counsel for the SFWMD stated that the actions listed in the RAP may be outside of their agencies' respective authorities to implement. The action specifically referred to was the removal of the L-67 Extension Levee. At the meeting, I explained that the purpose of the RAP was to identify those actions that we believe are necessary to prevent jeopardy to the Cape Sable seaside sparrow; the document did not consider the potential sociological or economic consequences of the identified actions. There was consensus among the staff members of the review agencies present that a transmittal letter could be attached to the RAP which outlined the concerns of the SFWMD and COE, including the potential consequences of increased water levels in the ENP expansion area and the 8.5 SMA as a result of actions identified in the RAP.

At the October 1, 1997, meeting of the Southern Everglades Restoration Alliance (SERA) sponsors and management committee, we discussed the actions in the RAP between our respective agencies and collectively decided to initiate the National Environmental Policy Act (NEPA) process on those category one actions listed in the RAP requiring review under NEPA. Furthermore, Colonel Terrance Rice, the former District Engineer, asked me to tell you whether or not your staff should begin the NEPA process for those actions that might result in increased flooding on public lands. We address that issue in this letter. The FWS hopes this letter will provide you and your staff with a clear understanding of those actions we believe are necessary to reduce the risk of extinction for the sparrow and the biological factors responsible for coming up with the actions in the RAP. We are concerned because January 1998 is fast approaching and is two years past the due date for the completion of the RAP, as required by the Test 7 biological opinion. Our concern is heightened because, in the two breeding seasons since the completion of the biological opinion, there has been a significant decline in the number of nesting sparrows west of Shark River Slough in Everglades National Park and Big Cypress National Preserve.

Status of the Cape Sable seaside sparrow

The Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*) was listed as an endangered species on March 11, 1967, pursuant to the Endangered Species Preservation Act of 1966 (32 FR 4001). That protection was continued under the Endangered Species Conservation Act of 1969 and the Endangered Species Act of 1973, as amended. The Cape Sable seaside sparrow was listed because of its limited distribution and threats to its habitat posed by large-scale conversion of land in South Florida to agricultural uses. Critical habitat for the Cape Sable seaside sparrow was designated on August 11, 1977 (42 FR 40685).

The entire Cape Sable seaside sparrow population exists as six subpopulations. As recently as 1992, the population northwest of Shark River Slough (western population) and the population in the vicinity of the Old Ingraham Highway (Old Ingraham population) represented core populations. In 1992, the western population represented 41% of the total population; it now maintains only 7% of the total population and no longer functions as a core population. Four other smaller peripheral populations to the east and northeast of Shark River Slough hold small and variable numbers of sparrows and make up the eastern population. In 1981 (prior to implementation of the Experimental Program) the eastern population supported over 1500 sparrows. This population now supports less than half of these numbers.

While in 1997 the number of sparrows in this population improved, the eastern population has not recovered to its 1981 level. The Old Ingraham Highway population, the only remaining core population, has remained relatively stable. However, this population is located in an area that is prone to wildfires and is limited in geographic extent. These factors make the population vulnerable to catastrophic fire and weather events and the Ingraham Highway population cannot, by itself, be counted on to maintain the species.

The limited distribution and habitat specificity of the Cape Sable seaside sparrow make it vulnerable to catastrophic or extreme events. In the eastern portion of its range, in northeast Shark River Slough and Taylor Slough, over drainage and fire have resulted in altered habitats for the Cape Sable seaside sparrow and a decline in the eastern population. In the western portion of its range, west of Shark River Slough and in the Big Cypress National Preserve, water management practices have extended the hydroperiod in the fringing marl prairies and have resulted in less suitable conditions for the sparrow. We believe the unusually high water levels in 1993, 1994, and 1995 have caused the decline in the western population. High water levels were a result of large quantities of rainfall in combination with regulatory releases of flood waters into Everglades National Park from the S-12 structures.

In summary, as a result of the structures and operations associated with the Central and Southern Florida Project, including the Experimental Program, the eastern portion of the sparrow's range has been over drained and the western portion has been flooded. As a result, the western population and the four peripheral populations that make up the eastern population have declined in total numbers of sparrows.

The small total population size and small number of subpopulations jeopardizes the survival and recovery of the Cape Sable seaside sparrow. If the population size becomes too small to allow birds to recolonize areas that have been locally extirpated, the species will become much more prone to extinction. Presently, the Cape Sable seaside sparrow has been reduced to a single subpopulation (Old Ingraham Highway population) that supports enough individuals to function as a source for recolonization (emigration) of other areas.

Risk assessment models for the sparrow have been completed by both the FWS and Dr. Stuart Pimm. The results of these modeling efforts are similar: both modelling efforts predict the extinction of the sparrow if the pattern of managed water flows experienced in the past 20 years is repeated. Our modeling simulations predict extinction of the sparrow within two decades if current population trends are not reversed. Dr. Pimm's modeling results point to the need for three healthy populations to prevent extinction of the sparrow.

Since completion of the Test 7 biological opinion, the FWS has identified new information that was not available when we prepared the opinion. This information further supports the jeopardy conclusion reached in the biological opinion and stresses the need for immediate action to reduce adverse effects on both the sparrow and its habitat. To address this new information, we separately asked you to reinitiate consultation on the Experimental Program of Water Deliveries to Everglades National Park.

Status of Water Management Practices

Federal land management agencies been attempting to eliminate the ecological problems caused by the C&SF Project almost since the Project's inception. Flows to Everglades National Park were almost entirely cut off immediately after the completion of the levee system closing in Water Conservation Area 3A. In 1968, in response to concerns from the Department of Interior about failing ecosystems in

Everglades National Park, Congress mandated a Minimum Water Delivery Schedule, whereby the Park was guaranteed a minimum amount of water every year. However, it soon became apparent that the artificially amplified flood events were as destructive as the artificial droughts. In 1983, the National Park Service issued the "Seven Point Plan" calling for a number of measures to remedy flooding problems and restore historical flow patterns in the Everglades. In response, Congress authorized the Experimental Water Deliveries Program in 1983, the Everglades National Park Protection and Expansion Act in 1989, the Modified Water Deliveries to Everglades National Park Project in 1992, and the C-111 Project in 1994.

Since 1983, the Experimental Water Deliveries Program has made 7 tests of water management operations in an attempt to improve the ecological conditions in the southern Everglades. As you are aware, the range of operational modifications allowable under the Experimental Water Deliveries Program is very limited because of your need to prevent flooding impacts to the 8.5 SMA. This restriction precludes making significant changes to the C&SF Project's operating rules and results in damaging regulatory releases into western Shark River Slough and over draining of northeast Shark River and Taylor Sloughs.

According to several technical reports by the South Florida Water Management District and U.S. Department of Interior, the net effects of the tests of the Experimental Program have been small and mixed. Overall, there is little evidence of significant benefits resulting from these tests but in the case of the Cape Sable seaside sparrow, the Experimental Program has had significant adverse affects by lowering canal stages along the eastern boundary of Everglades National Park. These canals are adjacent to designated critical habitat for the endangered Cape Sable seaside sparrow; we believe that lowering the water levels in the canals has modified the sparrow's critical habitat by increasing fire frequencies, promoting the invasion of woody vegetation, and diminishing the value of that habitat to the sparrow. From 1983 to present, the Experimental Program of Water Deliveries to Everglades National Park has lowered the stages in the canals along the eastern boundary of ENP. During this same time interval, the designated critical habitat of the Cape Sable seaside sparrow has significantly diminished in value due to reduced hydroperiods. Although we do not have data to show that changes to the critical habitat are caused by these lowered canal stages, we cannot ignore the correlation.

Based on our understanding of this information, the FWS believes normal operations of the gates and other structures of the L-29, L-31N, L-31W, and C-111 have incidentally resulted in significant disruptions of normal breeding patterns and modifications of suitable breeding, foraging, and rearing habitat to such a degree that the habitat no longer supports these functions.

Since the completion of the biological opinion, monitoring studies have measured a change in the structure of habitat west of Shark River Slough that seems clearly correlated with regulatory releases through the S-12 structures. High water conditions caused by regulatory releases have changed the structure and composition of this habitat from a mixed muhly-sawgrass prairie to a sawgrass-dominated marsh which is not suitable habitat for the Cape Sable seaside sparrow. At the same time, the western population of sparrows has significantly declined.

As you are aware, these are very serious issues for a species that is as close to extinction as the Cape Sable seaside sparrow. The FWS can only guess at the full extent of the Experimental Water Delivery Program's effects on the Cape Sable seaside sparrow because our agencies never completed an interagency consultation on the program in it's entirety. Nevertheless, we believe that daily actions, in

the form of operational practices, have resulted in an inability to protect and recover the Cape Sable seaside sparrow.

Recommendations

The Experimental Water Deliveries Program has been ongoing for 14 years. It is unlikely that there are undiscovered or undeliberated water management policies or operational rules that, if implemented, will significantly improve conditions for the Cape Sable seaside sparrow. Actions to ameliorate the sparrow's decline will require changing Project structural features and revising operational rules as delineated by the RAP. The FWS continues to believe the actions delineated in the RAP are those actions necessary to prevent the extinction of the sparrow in the short-term. However, we recognize that your staff have stated that some of the actions in the RAP fall outside of your authority to implement and that they cannot be accomplished in the short term. Despite our concerns for the sparrow, we are obliged to defer to your interpretation of your authorities. For this reason, we are no longer asking you to immediately implement the actions in the RAP (such as removing the L-67-Extension) that would result in flooding private lands. However, we believe these actions will be critical in the next two to three years.

At the same time, we understand that the Southern Everglades Restoration Alliance (SERA) has developed a process to implement a solution for the 8.5 SMA that will result in the most effective long-term resolution for both the Cape Sable seaside sparrow and northeast Shark River Slough. This process is termed the Statement of Principles Plan. SERA's goal is to implement a project in the 8.5 SMA as soon as possible; at the October 1, 1997, meeting between the SERA sponsors and management committee, Sam Poole, Executive Director of the South Florida Water Management District (SFWMD) stated that he believed that they could have a plan for full acquisition of the 8.5 SMA completed within 6 months, or by March of 1998. With this process in place, we should be able to proceed with any of the actions necessary to not only prevent the sparrow's extinction, but effect its recovery within two to three years.

Nevertheless, the risk of losing the breeding population of Cape Sable seaside sparrows west of Shark River Slough during the remainder of Test 7 is extremely high; if we lose this subpopulation, the extinction of the sparrow is almost a certitude. We recommend the following actions to reduce this risk, while recognizing that the risk will remain high:

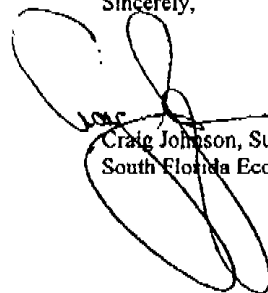
- a. Implement the actions identified in the RAP, in the short term, to alleviate the adverse conditions experienced by sparrows west of Shark River Slough. These actions include but are not limited to: 1) determining the appropriate operating criteria for structures S-343A, S-343B, S-344, S-12A, and S-12B, 2) using any manipulations necessary, including changing the regulation schedules for Water Conservation Areas 2 and 3 and gapping the L-67 A and C levees to result in total deliveries to Shark River Slough that correspond to a rainfall-delivery schedule and minimize regulatory releases through the S-12 structures, and 3) identifying other emergency actions not delineated in the RAP that may be taken for Cape Sable seaside sparrows in the short-term.

If you determine that any of the above actions will require review under the National Environmental Policy Act of 1969 (P.L. 91-190, as amended), we request that you immediately initiate the NEPA review process.

- b. Adopt, support, and implement SERA's final Statement of Principles Plan for the 8.5 SMA. The best scientific information available indicates that removing the L-67 Extension Levee and re-routing flows through Water Conservation Area 3B into northeast Shark River Slough must occur to solve problems for the Cape Sable seaside sparrow. Therefore, we ask the COE to support the South Florida Water Management District's development of a plan for full acquisition of the 8.5 SMA by March of 1998, the full acquisition plan should be one of a series of alternatives analyzed by the SERA through their process to develop a solution for the 8.5 SMA.
- c. We request that land acquisition within the 8.5 SMA be phased with removal of portions of the L-67 Extension Levee. Modeling previously completed by the SFWMD indicated that full removal of the L-67 Extension Levee would increase water levels about 0.5 feet within the 8.5 SMA and that this increase would occur on lands below 7.5 feet MGVD. Modeling has also indicated that the removal of the southern portion of the levee *will not* significantly increase water levels within the 8.5 SMA. We see no reason to wait until full acquisition of the 8.5 SMA has been completed to begin removal of portions of the levee, starting at the south end, as land is acquired. Therefore, we request that the COE complete the hydrologic modeling necessary to determine, as land is acquired, what portions of the levee may be incrementally removed. This will provide some relief to the short hydroperiod marshes west of Shark River Slough while the acquisition process occurs.

I hope this letter clarifies the short term recommended actions. If you would like additional information on any aspect of this letter, you or your staff should feel free to contact me or Ms. Melanie Steinkamp at (561) 562-3909.

Sincerely,



Craig Johnson, Supervisor
South Florida Ecosystem Restoration Office

cc: Ernie Barnett, DEP
Wally Hibbard, BICY
Lewis Hornung, SERA
Mary Ann Poole, GFC, Vero Beach
Sam E. Poole III, SFWMD
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December 24, 1997

Colonel Joe Miller
District Commander, Jacksonville District
U.S. Army Corps of Engineers
400 West Bay Street
Jacksonville, Florida 32232

Dear Colonel Miller

This letter, jointly written by the U.S. Fish and Wildlife Service and the National Park Service, forwards our request for immediate action by the U.S. Army Corps of Engineers on behalf of the endangered Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*). Recently-produced scientific information predicting grave consequences to the Cape Sable seaside sparrow from continued regulatory releases onto the sparrows' breeding habitat west of Shark River Slough have led us to request immediate, remedial, substantive and temporary modifications to the Experimental Water Deliveries Program to Everglades National Park. We would expect any deviations to last no longer than through July 1, the end of the sparrow's nesting season. On behalf of the Department of the Interior, the National Park Service (NPS) and the U.S. Fish and Wildlife Service (FWS) request the U.S. Army Corps of Engineers (COE) to take actions that reduce both the short- and long-term risk of an unsuccessful nesting season for the western subpopulation of the Cape Sable seaside sparrow. Moreover, our agencies cannot concur with any water management action that would increase the current risk of extinction to the endangered Cape Sable seaside sparrow or result in unacceptable environmental damage to the Water Conservation Areas, Everglades National Park, Big Cypress National Preserve, or other regional natural resources.

On December 17, 1997, the Southern Everglades Restoration Alliance (SEKA) Management Committee initiated a series of conference calls to discuss available options for addressing the risk to the Cape Sable seaside sparrow resulting from regulatory releases from Water Conservation Area 3A (WCA 3A) into Everglades National Park. Water levels in WCA 3A have risen into Zone A of the regulation schedule, which would normally trigger "gate-out-of-water" operations at all of the S-12 structures.

Based upon forecasts of dry season rainfall, typical water-level recession rates, and our current knowledge of the status of the Cape Sable seaside sparrow, our staffs concluded that Zone A regulatory releases through the S-12 structures would almost certainly preclude successful nesting by the sparrows' western subpopulation. Between 1992 and 1997, the western subpopulation has declined from an estimated 2688 birds to 280 birds, a nearly 90 percent decline. The best scientific information, gathered primarily by Dr. Stuart Pimm of the University of Tennessee, points to regulatory releases through the S-12 structures as the primary cause of this decline. The endangered Cape Sable seaside sparrow is currently sustained by two core subpopulations; the western subpopulation is one of those core subpopulations. If the adults remaining in the western subpopulation do not breed successfully during the next breeding season, the subpopulation is

likely to become extinct. The loss of this western subpopulation, in turn, would make the extinction of the entire species almost certain.

The WCA 3A regulation schedule and the operational rules for the S-12 structures were last modified under the Two Year Test of the Experimental Water Deliveries Program; the environmental assessment (EA) and Finding of No Significant Impact (FONSI) for the regulation schedule and operational rules were completed on June 7, 1985. As a result, the WCA 3A regulation schedule and the operational rules for the S-12 structures have remained unchanged for more than a decade, despite significant new information on the effects of those operations on the environment of Everglades National Park and Big Cypress National Preserve, including the endangered Cape Sable seaside sparrow. Since the EA was completed, new field investigations and research on the Cape Sable seaside sparrow have concluded that regulatory releases from WCA 3A have affected the Cape Sable seaside sparrow in two ways:

1) Regulatory releases since 1993 have shortened the available window for nesting and have interfered with reproductive success. In a normal year, Cape Sable seaside sparrows initiate nesting by early March and continue until the onset of the wet season. Research has shown that Cape Sable seaside sparrows fail to initiate breeding if greater than 10 centimeters of water is on the ground. Since 1992, high water conditions have severely reduced or entirely eliminated the period of time available for breeding to occur, during this same time period the western subpopulation has declined by 90%, from 2608 birds in 1992 to 280 birds in 1997.

2) Since 1993, flood releases have resulted in vegetative changes in Cape Sable seaside sparrow habitat west of Shark River Slough and rendered much of the habitat unsuitable for breeding. Vegetative monitoring studies have measured a change in the habitat west of L-67 extension that is strongly correlated with regulatory releases through the S-12 structures. High water conditions into Everglades National Park have changed the structure and composition of this habitat from a mixed mucky-sawgrass prairie to a sawgrass-dominated marsh, which is not suitable habitat for the Cape Sable seaside sparrow. The amount of time it will take for the vegetation to shift back to a mucky-dominated system or whether a reverse shift will occur is unknown.

Field research on the sparrow has also been recently incorporated into risk assessment models, completed by both the FWS and Dr. Pimm. The results of these modeling efforts are alarming: both modeling efforts predict the extinction of the sparrow if the pattern of managed water flows experienced in the past 20 years is repeated. FWS modeling simulations predict extinction of the sparrow within two decades if current population trends are not reversed. Releasing regulatory flows into western Shark River Slough will perpetuate the trend that has resulted in the decline of the western core population of Cape Sable seaside sparrows; this downward trend led to the species' extinction in modeling simulations.

Recent maximum flood releases through the S-12s, which occurred from June 6 to October 24 of this year, have created abnormally high water conditions over the sparrow's western habitat. These recent regulatory flood releases have created water levels that may not recede to levels adequate for Cape Sable seaside sparrows to nest in 1998. This year, December water levels in western Shark River Slough in Everglades National Park are the third highest ever recorded. It is worth noting that rainfall so far this year over the southern Everglades has been 54 inches, only slightly wetter than the typical 52 inches.

At this time, continued regulatory releases would exacerbate current flood conditions and would likely preclude the possibility of a successful 1998 nesting season. As stated earlier, faced with the sixth consecutive nesting season with little to no breeding by birds in the western core population, the Cape Sable seaside sparrow faces extinction. The western population of the Cape Sable seaside sparrow faces local

extirpation, with extirpation of the western population comes an elevated and, in the opinion of the FWS and NPS, an unacceptable risk of extinction.

As you no doubt can see, these are very serious issues for a species that is as close to extinction as the Cape Sable seaside sparrow. In the view of the FWS and NPS, the current condition in western Shark River Slough represents a condition requiring immediate and corrective action. The Remedial Action Plan, attached to the November 18, 1997 letter to you from the FWS, contains specific recommendations on water management actions that would provide direct and significant benefits to the Cape Sable seaside sparrow. The FWS and the NPS are simultaneously undertaking the actions listed in the Remedial Action Plan that are within our respective agencies' purview.

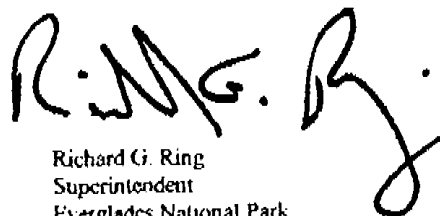
The NPS and FWS cannot concur with actions that increase the risk of an unsuccessful nesting season, such as increasing regulatory releases onto the western habitat above current levels. Furthermore, the most desirable actions are those which reduce the S-12 releases to zero, which minimizes risk of flooding during the nesting season. Also, the Department of the Interior cannot concur with actions that damage or inflict unacceptable harm to other natural areas in the South Florida ecosystem, particularly the Water Conservation Areas. We support actions that distribute consequences equally among all C & SF Project beneficiaries. Lastly, we would request that monitoring plans and funding mechanisms for those plans be initiated so that we are fully prepared to monitor the effects resulting from this extraordinary effort to avoid the Cape Sable seaside sparrow's extinction.

The steps that the COE have already taken have demonstrated your clear understanding of the perilous situation into which we have placed the Cape Sable seaside sparrow. You and your staff are living up to the Corps' "can-do" reputation, and we are optimistic that corrective actions are immanent. The Fish and Wildlife Service and the National Park Service are committed to work in concert with the other SERA agencies to bring both immediate and long-range benefits to the ecosystems of south Florida.

Sincerely,



for Steven Forsythe
State Supervisor
U.S. Fish and Wildlife Service



Richard G. Ring
Superintendent
Everglades National Park

cc. Sam E. Poole III, SFWMD
Ernie Barnett, DEP

JAN-16-98 FRI 11:05 AM USAED H&H BRANCH

FAX NO. 9042321772

P. 25

Jan-15-98 04:39P S FL ECOSYSTEM OFFICE
FROM FWS - LOXAHATCHEE NWR

12.29.1997 12:11

NO. 2 P. 2



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Arthur R. Marshall
Loxahatchee National Wildlife Refuge
10216 Lee Road
Boynton Beach, Florida 33437-9741

December 29, 1997

To Whom it may concern:

After discussing a proposal for deviating from the water schedule for WCA-1, Loxahatchee NWR, with Susan Bollock ACOE, on 12-23-97 we quickly researched some past nesting and water depth history for the refuge. Attached are some rough averages and timing for water elevations and nesting phenology for the period 1993 through 1997.

The proposal discussed was for holding the water elevation at 17.5' for two months, presumably January and February 98. After reviewing the data it is our contention that holding the water this high for that period of time would eliminate most nesting for wading birds for 1998. High water early that is not receding, generally halts onset of nesting activity. The other end of the issue is that the onset of the summer rainy season ends nesting and reduces success of activity already underway.

We are in full support for doing what is necessary to protect the Cape Sable sparrow. We do however believe that this alternative will be very detrimental to wading bird nesting on the refuge. Additionally, we will likely experience adverse impacts to the tree islands that have already been inundated for some time.

In addition to reviewing our data we also reviewed the following two publications to form our conclusions:

Frederick, P.C. and M. W. Collopy 1988. Reproductive Ecology of Wading Birds in Relation to Water Conditions in the Florida Everglades. And

Bancroft, G. Thomas, S. D. Jewell, and A. M. Strong. 1990. Foraging and Nesting Ecology of Herons in the Lower Everglades Relative to Water Conditions.

Sincerely,

~~For:~~ Burkely S. Neely, Jr.
Refuge Manager

BSN:AF:af

Author: ZEBUTH H@wpb1.dep.state.fl.us at Internet
Date: 1/14/98 8:34 PM
Priority: Normal
TO: Jon Moulding at PD
CC: Lewis I Hornung at WPALM
Subject: FWD: Estuarine Impacts

----- Message Contents -----

Jon,

I hope the following is what you are looking for. It was my impression it was to be short and general. If I was wrong and you need something else, please let me know.

Herb.

Short term (several months) increased freshwater discharges to southeast coast estuaries are necessary to attempt to prevent significant harm during the breeding season, to the remaining population of Cape Sable Sparrows in western Shark River Slough. These freshwater discharges will occur through the C-51 Canal to Lake Worth, the Hillsboro and North New River Canals to the Intracoastal Waterway, the Miami Canal to Biscayne Bay, and the L-31N/C-111 Canal system to Barnes Sound. All of these estuaries have experienced significant freshwater discharges and the resulting environmental damage numerous times in the past as a result of the normal operation of the Central and South Florida Flood Control Project.

Additional environmental damage to Lake Worth will probably not be significant. Recovery of a healthy estuarine system in Lake Worth will be delayed until large scale discharges which are regular occurrences during normal operation of the C&SF Project, cease. Discharges to the Intracoastal Waterway from the Hillsboro and North New River Canals occur very near inlets which are flushed with large volumes of sea water each tidal cycle. This flushing action will reduce potential harm. Discharges from the Miami Canal enter Biscayne Bay through the Miami River. Additional high volume discharges could increase the movement of toxic Miami River sediment into the bay. The close proximity of the Port of Miami shipping channel and the large tidal exchange which occurs in most of the bay should reduce other harmful impacts. If discharges through the L-31N/C-111 Canal system require the opening of all culverts in the S-197 Structure, impacts will occur in Barnes Sound. When the bottom salinity is reduced to very low levels, damage to the benthic invertebrate community begins to occur. Prolonged low salinity levels can eliminate this population which represents an important base of the food web. If low levels continue for a sufficient period of time, sea grass in the sound will eventually lose exposed leaves. Recovery from severe damage can take several years.

JAN-16-98 FRI 11:00 AM USAED H&H BRANCH

FAX NO. 9042321772

P. 17

Jan-15-98 09:31A OES - GFC

8509225679

P. 02



FLORIDA GAME AND FRESH WATER FISH COMMISSION

QUINTON L. HEDGEPEETH, DDS MRS. GILBERT W. HUMPHREY THOMAS B. KIBLER JAMES L. "JAMIE" ADAMS JR. JULIE K. MORRIS
Miami Miccosukee Lakeland Bushnell Sarasota

ALLAN L. EGBERT, Ph.D., Executive Director
VICTOR J. HELLER, Assistant Executive Director

January 14, 1998

OFFICE OF ENVIRONMENTAL SERVICES
BRADLEY J. HARTMAN, Director
FARRIS BRYANT BUILDING
620 South Meridian Street
Tallahassee, FL 32399-1600
(850) 488-8661
SUNCOM 278-6661
FAX (850) 923-5679
TDD (850) 488-9542

Dr. Jon Moulding
Planning Division
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Re: Current High-Water Event,
Palm Beach, Broward, and
Dade Counties

Dear Dr. Moulding:

It is our understanding that the U.S. Army Corps of Engineers is in the process of preparing two emergency documents under the National Environmental Policy Act, one of which will assess the impacts of (1) remaining in zone C within Water Conservation Area (WCA) 3A for an unknown length of time, and (2) gapping L-67A and allowing water levels in WCA 3B to rise to 9.0 feet (gage 71), at which time the existing gap in L-67C would be filled. The purpose of these actions would be to avoid opening the S-12 structures any further than they are currently in order to avoid flooding the nesting habitat of the western subpopulation of the endangered Cape Sable seaside sparrow, while minimizing negative impacts to resources in WCA 3A. The U.S. Fish and Wildlife Service has predicted that some level of successful nesting must occur within this population this year, or the entire subspecies is likely to become extinct.

We further understand that you have solicited from us a summary of our concerns regarding the Water Conservation Areas by the close of business today. The Office of Environmental Services, in consultation with regional staff of the GFC's Division of Wildlife, is in the process of evaluating these impacts, and is currently focusing on recent and anticipated future impacts on extended flooding of the tree islands in WCAs 3A and B. These tree islands are a unique part of the Everglades landscape mosaic, and provide at least two ecologically important roles: (1) "high" tree islands provide a substantial amount

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Jan-15-98 09:32A OES - GFC

Mr. Jon Moulding
January 14, 1998
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of upland in a sea of marsh communities and act as refugia for upland-dependent wildlife during flood events and (2) "low" willow heads are used extensively in today's system for nesting by wading birds. Although we have not yet found definitive information as to tree island use by neotropical migrating birds, anecdotal evidence indicates that both types of tree island may provide a function for these species, as well.

The high-water event starting in November 1994 and extending through 1995 appeared to have wreaked extensive damage to the higher tree islands which lost much of their native tropical vegetation, and it killed or severely damaged more water-tolerant tree species, such as red bay, swamp bay, and willow (R. Guerra, GFC, unpublished report, September 1996). Since 1994, water levels have been sufficiently high to reduce once-extensive willow islands heavily used for nesting by a number of species of wading bird, including the tricolored heron, little blue heron, and roseate spoonbill (all listed by the State as species of special concern). White ibis (also a species of special concern), while not completely dependent on willows for nest sites, also used these willow islands to nest. Over the past several years, one such island, "Andytown," in eastern WCA 3A has been reduced from about 60 acres to roughly one-quarter of an acre representing the "head" of this island. We are concerned that loss of today's nest sites, however imperfectly they may reflect historic nesting patterns, will result in a further decline in wading bird nesting opportunities and populations.

At this point in our analysis, it appears that there is little information upon which to predict the ability of damaged tree islands and willow heads to recover or regenerate. Some of the islands that were severely damaged since the beginning of the 1994-1995 high-water event have shown little or no sign of tree regeneration (S. Coughlin, GFC, pers. comm.). In August 1997, the Office of Environmental Services began a more detailed survey of conditions on these tree islands in order to determine if and how these conditions can be related to water-management practices; however, this study has not been underway for a sufficient amount of time to provide substantial insight at this time. In 1974, Walt Dineen reported observations on the demise of a large willow head in WCA 2A, and noted that it took roughly five years of higher water levels than had been experienced during the 1950s and 1960s to obliterate that willow head, which has never recovered. The GFC has attempted to replant some of the tree islands that have been lost through fire or flooding in the WCAs, but our efforts have been on a relatively small scale and have met with limited success. We have never attempted the replanting of a willow head, but expect that it would take an unknown but probably fairly long time for the

Mr. Jon Moulding
January 14, 1998
Page 3

sprouting trees to mature into the complex structure that provides suitable nest sites for species that nest in the subcanopy and for species whose nests are supported by the outermost branches.

We do not believe that we can simply look at December 1997 tree island conditions in order to make an assessment of the extent of damage that continuing to operate in zone C for an unspecified length of time would incur. Such an assessment must be done in context of the damage that has essentially been on-going since 1994. That the tree islands have been damaged is evident, and we can only expect that operating in zone C, where many tree islands are submerged or saturated, will continue this course of damage. We do not know how reversible this damage may be, but we believe that it is safe to assume that continued management of the WCA 3A at high water levels with very limited ability to reduce the levels using current structures will effectively preclude significant regeneration. We are further concerned that the proposal to raise water levels in WCA 3B to an elevation of 9.0 feet NGVD will extend that damage to an area that has suffered little flooding and relatively less tree island damage. The tree islands in WCA 3B begin to become inundated when the water levels reach 8.4 feet (71 gage) (S. Coughlin, GFC, pers. comm.). Since there is little or no operational capability to lower levels in 3B, there is a reasonable probability of extended high water levels, perhaps into the wet season. We are concerned that extended levels at or above 8.4 feet will begin to adversely affect these tree islands, perhaps dramatically.

Because we have not yet completed our collection of information known about the relation of hydroperiod and tree species, our input at this point is preliminary. We know that tree islands appear to have been damaged by a combination of flood and drought, and that flood conditions that affect vegetation die-off are related to depth and duration. The GFC's unpublished report produced by the Division of Wildlife and cited above recommends that the average of the readings for gages 6-4 and 6-5 within WCA 3A should not exceed 10.11 feet MSL if significant damage to the high tree islands is to be avoided; however, the recommendation in this report does not address duration. At this point in our analysis, it appears that the most important action that could be implemented to rejuvenate the willow strands after over five years of flooding would be to lower the water at these strands to ground, or slightly below ground, level by the end of the dry season. In the case of "Rescue Strand," one of the severely impacted islands used as a rookery, this action would equate to a reading of 9.3 feet at the 6-3 gage by March 15.

JAN-16-98 FRI 11:02 AM USAED H&H BRANCH

FAX NO. 9042321772

P. 20

Jan-15-98 09:35A OES - GFC

8509225679

P. 05

Mr. Jon Moulding
January 14, 1998
Page 4

As we gather and analyze further information, we will refine our views and communicate them to you. Please call me (850-488-6661) if you would like to discuss these comments.

Sincerely,


Bradley J. Hartman, Director
Office of Environmental Services

BJH/MAP/
ENV 2-16/2/3

cc: Dr. Allan L. Egbert, GFC
Mr. Ernie Barnett, FDEP
Mr. Steve Forsythe, FWS
Mr. Samuel Poole III, SFWMD
Superintendent Richard Ring, ENP
Mr. Lewis Hornung, SERA
Mr. Elmar Kurzbach, COE
Mr. Susan Bullock, COE



United States Department of the Interior

Fish and Wildlife Service
Office of the State Supervisor
P.O. Box 2676
Vero Beach, FL 32961-2676
(561) 562-3909

15 January 1998

Colonel Joe Miller
District Commander, Jacksonville District
U.S. Army Corps of Engineers
400 West Bay Street
Jacksonville, Florida 32232

Dear Colonel Miller:

This letter responds to requests by your staff for information from the U.S. Fish and Wildlife Service to include in an Environmental Assessment your staff is producing on the environmental effects of changing the water regulation schedules for the Loxahatchee National Wildlife Refuge, Water Conservation Area 2, and Water Conservation Area 3. In December, your agency modified these regulation schedules in an effort to improve the chances for successful breeding by the endangered Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*) west of Shark River Slough during the 1998 breeding season.

Numerous interagency conference calls occurred during December 1997 and January 1998 to discuss the options available to reduce the probability of standing water on the breeding grounds of the sparrow from March through June. Many alternatives were discussed, ranging from those actions that would result in regulatory releases being moved to the east and into northeast Shark River Slough, to the no action alternative. As a result of these discussions, your agency decided to (1) open a 1,000 foot gap in the L-67A (the gap in the L-67C is still open from the pilot test), (2) modify the regulation schedules for Water Conservation Areas 2 and 3 and the Loxahatchee National Wildlife Refuge to allow water levels to rise above "regulation," (3) block culverts along the tram road at Shark Valley, (4) open culverts in the L-67 Extension borrow canal, and (5) use the east coast canals and the South Dade Conveyance system to move water to the east and into the estuaries.

We believe the short-term effects of the above actions may include adverse effects to the endangered wood stork (*Mycteria americana*) by delaying or precluding the initiation of nesting during the 1998 breeding season. High water levels during the dry season are associated with reduced nesting effort and reduced nesting success in wood storks. We believe the above actions may adversely affect the endangered wood stork by diminishing the habitat available for nesting

and, therefore, successful breeding; high water levels can also cause adult wood storks to abort nesting efforts and can preclude successful fledging of young birds. Maintaining high water levels during the dry season could also result in willow die-offs (this refers to both willow heads and tree islands), particularly in Water Conservation Area 3, where they are important nesting substrate for wading birds, including wood storks.

Maintaining higher water levels in Water Conservation Areas 2 and 3 also reduces foraging opportunities for wood storks during the breeding season that may lead to adverse effects; sub-optimal foraging conditions during the breeding season results in lower wood stork nesting success. Often, when inadequate foraging opportunities are available, nests with young wood storks and other wading birds are abandoned and nestlings starve to death. Water Conservation Area 2 is an important foraging area for wading birds nesting in the Alley North and Andytown colonies. If water levels are maintained higher than those levels that allow successful foraging by nesting adults, poor wading bird nesting success will result.

Portions of Water Conservation Area 3A are designated critical habitat for the snail kite (*Rostrhamus sociabilis plumbeus*). Maintaining high water levels during the dry season in Water Conservation Area 3A may adversely modify the snail kite's critical habitat. Like wood storks, snail kites use willows as one of the primary nesting substrates in the Water Conservation Areas. High water levels during the dry season will result in the death of some willows and will reduce the value of the Water Conservation Area for snail kite breeding.

By letter dated December 29, 1997 (enclosed), Loxahatchee National Wildlife Refuge concluded that holding water levels at 17.5 feet during January and February would eliminate most nesting for wading birds during the 1998 season. Additionally, personnel at the refuge wrote that adverse impacts will occur to tree islands within the refuge as a result of high water levels.

Moving regulatory releases through the east coast canals and into the estuaries will adversely affect the estuarine ecosystem. Large pulses of freshwater released through storm water canals adversely affect submerged aquatic vegetation (including sea grass beds), fishes, and macro invertebrates throughout Florida's southeast coast. We believe that re-routing regulatory flows through the east coast canals and into the estuarine environment will adversely impact these productive ecosystems.

Because of these immediate adverse effects on endangered wood storks, snail kites, and other Federal trust resources, we do not endorse any water management actions that artificially increase water levels in the Water Conservation Areas. Our December 24, 1997, letter to you (signed jointly with Everglades National Park) iterated our inability to concur with the above actions. That letter states that "... the Department of Interior cannot concur with any actions that damage or inflict unacceptable harm to other natural areas in the South Florida ecosystem,

Jan-15-98 04:37P S FL ECOSYSTEM OFFICE

particularly the Water Conservation Areas." The approach the U.S. Army Corps of Engineers is currently taking places the entire burden of water management on the natural system, with adverse effects on the numerous species that rely on different portions of the natural system to survive; this approach requires us to choose which portion of the natural system will suffer the greatest harm. We have never recommended actions that protect the endangered Cape Sable seaside sparrow at the expense of other portions of the historic Everglades ecosystem. Despite suggestions to the contrary, we have consistently maintained that *all* beneficiaries of the C&SF project, including private lands, should share the adversity created by high water levels in South Florida. We believe your agency currently has options to share the adversity that are not being used, such as using the S-333 structure to deliver flows to northeast Shark River Slough.

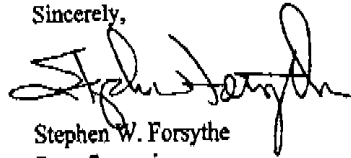
Your staff also asked us to recommend a date for discontinuing the "emergency" modifications to the water regulation schedules to prevent loss of the western breeding population of the endangered Cape Sable seaside sparrow. Until regulatory releases can be distributed across all of Shark River Slough, including northeast Shark River Slough, the western breeding population of the Cape Sable seaside sparrow is at an unacceptable risk of extinction. Clearly, there are several civil works projects that would effect this outcome; these projects are currently authorized and will provide critical remedies to the plight facing the sparrow and Everglades National Park when they are finally implemented. We believe components of these projects could be implemented immediately, such as moving flows through the S-333 and degrading portions of the L-67 Extension levee. However, based on discussions we have had with you and your staff over the past few months, we do not know when components that can be implemented immediately, or when larger projects themselves, will finally be implemented. In light of this, we cannot provide you with a date when modifying water regulation schedules to protect the western breeding of the Cape Sable seaside sparrow could be discontinued.

We appreciate the efforts you and your staff have taken to address our concerns about the endangered Cape Sable seaside sparrow and the short-hydroperiod wetlands in western Everglades National Park and eastern Big Cypress National Preserve. We also appreciate the dilemma you face because of environmental effects of the high water levels that permeate South Florida. We support your attempts to find a solution to water management that continues to

Jan-15-98 04:38P S FL ECOSYSTEM OFFICE

protect the sparrow's breeding habitat on Department of the Interior lands and we are willing to work with you to ensure that such a solution does not harm what remains of other parts of South Florida's natural systems.

Sincerely,



Stephen W. Forsythe
State Supervisor

cc: Jon Moulding, COE
Dick Ring, ENP
Ernie Barnett, DEP
Sam Poole III, SFWMD
Lewis Hornung, SERA
Brad Hartman, GFC
Mary Ann Poole, GFC
ARD, ES, Atlanta, GA

Enclosure

Jan-15-98 04:40P S FL ECOSYSTEM OFFICE
FROM FMS - LO:RHITCHEE HMR

12.23.1997 12:12

NO. 2 P. 3

AVG H₂O Depth From 1993 → 97 (18C)

Mid January	16.88
Late January	16.74
Mid Feb.	16.42
EARLY MARCH	16.24
MID MARCH	16.25
LATE MARCH	16.24
EARLY APRIL	15.95

LISTING of BIRDS IN ORDER of SPP = ¹⁹⁹³⁻¹⁹⁹⁷ earliest to Latest Nester:

ANHI > Late January
GBHE

GREG Late Feb to Early March

LBHE > Early
TCHC to Late March
SNEG

WHIB END of March

CAEG EARLY APRIL

Jan-15-98 04:40P S FL ECOSYSTEM OFFICE
FROM FWS - LOXAHATCHEE NWR

12.29.1997 12:12

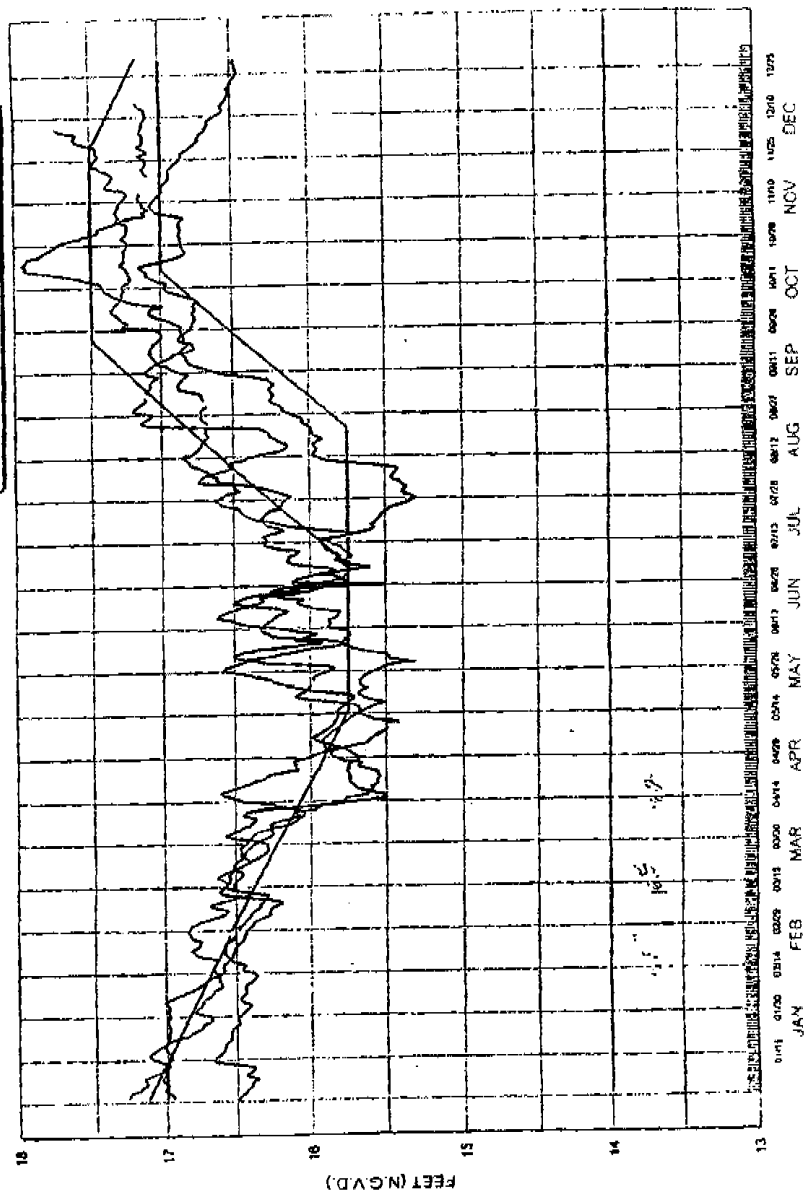
NO. 3 P. 4

A.R.M. LOXAHATCHEE NATIONAL WILDLIFE REFUGE

INTERIM WATER REGULATION SCHEDULE 1995-97

You cannot see the colors for each year
but you get the picture of what water
levels do "normally".

- 1-8C GAUGE 1996 - 1-8C GAUGE 1997
- 1-8C GAUGE 1995



Author: towlest@mail.state.fl.us at Internet
Date: 1/22/98 10:01 PM
Priority: Normal
TO: Jon Moulding at PD
Subject: Emergency EA comments

----- Message Contents -----

Jon,

If you have any trouble opening the previous file, this should be readable.

Comments on the draft environmental assessment for emergency deviation from Test 7 of the Experimental Program of Water Deliveries to Everglades National Park to protect the Cape Sable Seaside Sparrow

Section 3.08. Effects of High Water on Tree Islands in the WCA's. The GFC expressed concerns about the proposed increase in the depth and extent of flooding of tree islands in the WCA's. Tree islands occupy less than 1.5% of the Everglades landscape (in CA 2 and CA 3) in areal extent, but are an invaluable component of the regional ecology of the Everglades. Many tree islands and willow strands have been severely damaged by abnormally high water levels beginning in 1993 and extending up until the present time. The extreme water depths and durations experienced during the 1994-95 high water period were particularly damaging to the full spectrum of tree islands from the low elevation willow strands to the high elevation tropical hammocks. Both extensive willow strands and tropical hammocks are rare and valuable plant communities within the WCAs. Within WCA 3A, higher water levels will continue to damage and prevent the regeneration of tree islands already weakened by past submergence and soil saturation. The GFC is concerned that the maintenance of elevated water levels throughout the dry season (November-May) will be especially detrimental to tree island vegetation, as this is the time of the year most tree species should be adding new growth at a vigorous rate. The GFC is particularly concerned with the proposal to raise water levels to 9.0 feet in WCA 3B during the dry season, since some of the islands begin to become inundated when water levels reach 8.4 feet. The maintenance of higher water levels will extend flood damage to an area that has previously received relatively little damage. Such flooding would tend to be of long duration because there is no operational capability to effectively lower water levels when the sparrow emergency is over.

Section 3.09 Effects of High Water on Wildlife in the WCA's. The GFC expressed concern that continued flood damage to large willow strands which have served as the primary nesting sites for wading birds in the WCAs since the 1970's would further reduce wading bird nesting opportunities and populations in South Florida. Furthermore, higher water levels result in poor feeding conditions, poor nesting effort, and poor nesting success for short-legged and tactile feeding wading birds. Wood Storks, snowy egrets, and white ibis would probably suffer the greatest declines in reproductive effort and success. During successful wading bird nesting years in the WCAs, WCA 2, west-central CA 3A, and CA 3B have all served as important feeding areas for wading birds at some time during the nesting cycle. The anticipated increased water depths and duration of flooding will seriously affect upland-dependent wildlife including various mammals, reptiles and amphibians, some of which are only beginning to recover from the previous 1994-95 flood event.

Section 2.01. Should successful breeding be changed to optimal breeding? We are not sure whether this question was resolved or if it is stated explicitly in the RAP.

emerEA.com.wp



Tavernier Science Center
115 Indian Mound Trail
Tavernier, Florida 33070
(305) 852-1542/5092/8012
(305) 852-8012 fax

FAX MEMORANDUM

TO: John Moulding
FROM: Wayne Hoffman
SUBJECT: Environmental Assessment
DATE: 21 January 1998

I have studied the January 16 Draft EA and participated in conference calls reviewing it on 20 and 21 January. I offer the following comments:

1. The EA document you submit will necessarily conclude a finding of significance; that within the stated constraints there is no way to operate the system in the current situation without significant impacts on natural resources, including endangered species. The described measures are likely to have a positive incremental effect on the dry-down rates in sparrow habitat, but in my opinion they are not adequate to ensure adequate drydown unless we get a lot of cooperation from the weather.
2. The modification I proposed to section 2.07, phasing in S-12 regulatory releases from 10.9 to 11.0 feet, is an attempt to give the sparrow habitat a bit more chance to dry down.
3. Section 2.11: Excessive flooding of the western sparrow habitat not only prevents breeding, but also has been causing vegetative changes that, from the perspective of the sparrows, are habitat degradation. Exposing the maximum area of habitat for the longest possible period is important to prevent further changes in the vegetation. The emergency measures described in the EA need to be instituted and maintained as long as possible so that there will be habitat available for future breeding, no matter how much or how little breeding is found this year. So, even if drydown cannot be achieved until after April 15, the measures need to be continued anyway. And, they need to be continued into the summer until the point that local rainfall makes them ineffective at keeping the habitat exposed, rather than to a set cutoff date

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TOTAL P.01



FLORIDA GAME AND FRESH WATER FISH COMMISSION



QUENTON L. HEDGECOCK, DGS MRS. GILBERT W. HUMPHREY THOMAS R. KIBLER JAMES L. "JAMIE" ADAMS, JR. JULIE K. MORRIS
Miami Miccosukee Lakeland Bradenton Sarasota

ALLAN L. ROBERT, Ph.D., Executive Director
VICTOR J. MILLER, Assistant Executive Director

January 23, 1998

HARRIS BRUNY BUILDING
430 South Michigan Street
Tallahassee, FL 32399-1600
(904) 487-8796
TDD (904) 487-8542

Col. Joe Miller
District Engineer
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Re: Emergency Deviation from Test 7,
Environmental Assessment (First Draft),
Multiple Counties

Dear Col. Miller:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission (GFC), in consultation with the Division of Wildlife, has reviewed the referenced draft Environmental Assessment (EA), and provides the following recommendations.

The U.S. Fish and Wildlife Service (FWS) has requested that the U.S. Army Corps of Engineers (COE) take immediate action to prevent hydrologic conditions that they predict will make it likely that the Cape Sable seaside sparrow (endangered) will become extinct. The Cape Sable seaside sparrow has a very limited range, lying almost entirely within Everglades National Park, and depends on a vegetation community that has a very narrowly defined hydroperiod. The FWS has produced an analysis of trends in population distribution and size, and has concluded that immediate action is necessary this year in order to avoid hydrologic conditions that would further reduce the population to a point at which their models predict extinction within 10 to 20 years.

The purpose of this EA is to determine if there will be a significant impact on the human environment, as defined by 40 CFR, §1508.14 ("Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act"), from emergency actions already underway to address the FWS predictions. It describes two major operational changes: (1) temporarily elevating the flood-release zone in the water regulation schedules of WCAs 1, 2A, and 3A; and (2) reinitiating the pilot test to gap the L-67A, as already permitted by the Florida Department of Environmental Protection, except that the ultimate trigger for reclosing the gap would be changed from 8.5 to 9.0 feet NGVD (as read at gage 71) until May 15, in order to allow additional water storage in WCA 3B. The operation of the South Dade Conveyance System would be altered in

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Col. Joe Miller
January 23, 1998
Page 2

order to convey increased seepage from WCA 3B, and the four G-69 culverts would be fully opened to provide a maximum conveyance of 400 cubic feet per second (cfs) southward out of WCA 3B. Actions that would have the potential to flood private property are not contemplated by this EA. This EA does not address the operation of pumps into the WCAs which makes it difficult to predict water levels and associated biological impacts during this period.

The GFC manages WCAs 2A, 2B, 3A, and 3B as the Everglades and Francis M. Taylor Wildlife Management Area, which represents about one-half of the remaining Everglades landscape. We therefore have a very strong interest in maintaining water levels that support the natural diversity of sloughs, sawgrass communities, wet prairies, willow heads, and tree islands typical of this unique wetland system. We are concerned that some of the actions described by the draft EA will have significant, deleterious impacts to this area, which has already suffered a history of drought and flood events. In order to address these concerns, we provide the following recommendations relating to sections 2.06, 2.07, 2.09, and 2.10 of the draft EA.

Section 2.06: Action to Create New Outlet from WCA 3A

This section deals with gapping the L-67A and allowing water levels to rise to 9.0 feet NGVD in WCA 3B. Observations of tree islands during the high-water event of 1995 indicate that water levels in WCA 3B begin to reach tree species not normally inundated when the water level at gage 71 approaches 8.4 feet. Increasing the maximum stage depth to 9.0 feet would inundate many of the tree islands, while reducing water levels in southern WCA 3A by only an estimated 1 to 2 inches. Further, it is not yet clear how long it will take water levels in WCA 3B to recede. This is of particular concern considering that May 15 is very near the typical start of the wet season, when additional water is expected to fall directly into the WCAs. We recommend against risking excessive and prolonged flooding in one of the few areas where the tree islands have not yet been substantially damaged by flooding, and we recommend that the trigger for closure be maintained at a level not to exceed 8.5 feet, per the original permit conditions. This could be accomplished by balancing outflows through the G-69 culverts with inflows through the L-67A gap or, if necessary, by closing the gap either partially or entirely.

Section 2.07: Action to Reduce the Need for Discharge from the S-12s

The draft EA proposes to create a new water regulation zone for WCA 3A, Zone A1, which would increase the stages that call for flood release for the period January 1 to the end of May, 1998. Flood releases would not occur until the three-gage average used to regulate water levels in WCA 3A reaches 10.9 feet (as opposed to 10.75 feet) until March 15 (as opposed to the end of the first week in February), after which it would transition down to the usual schedule in late May. When water levels are within this new zone, water would be discharged only through S-12C and D at either a total of 1000 cfs or the maximum amount, as estimated by the Department of the Interior, that would avoid adverse impacts to the nesting area of the sparrow in

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western Shark River Slough. Additionally, we understand that the COE is considering a variation of this zone whereby S-12C and D would be fully opened when the water level reaches 10.9 feet, and all of the S-12s would be opened when it reaches 11.0 feet. The advantage of this latter type of schedule deviation is that it would (1) provide a small but additional measure of protection for the sparrow, (2) provide an agreed-upon water depth at which incremental releases would be made through the S-12s to reduce further high-water impacts to WCA 3A, (3) provide the COE an agreed-upon direction as to how to proceed if water levels continue to increase, and (4) eliminate the option to further reduce flows out of the S-12s when levels are in the new zone. The disadvantage is that if water levels reach 11.0 feet, the majority of tree islands in southern WCA 3A will be flooded. We would support this variation of the proposed schedule under the following two conditions.

1. The schedule will immediately revert to the usual set of operating criteria (1) when the "hydrological point of no return" is reached, (2) if no active breeding occurs by April 15 (according to the FWS, the last date for any reasonably successful breeding to occur), (3) upon completion of all active nesting, or (4) by June 1 (the latest date at which fledging would be expected to occur, given April 15 deadline provided by the FWS), whichever occurs first.

2. A thorough evaluation is conducted to determine the influence of S-12C and D flows on the NP205 gauge as specified in section 2.09 of the EA. If it is determined to be feasible, either through modeling or trial, flows through the S-12C and D should be increased to the greatest extent possible to reduce water levels in WCA 3A and to minimize the chance of having to make regulatory releases through all of the S-12s if water levels should exceed 11.0 feet.

Section 2.09: Actions to Divert S-12 Discharges away from the WSRS (Western Shark River Slough)

This section addressed sandbagging the culverts under the Shark River Tram Road in order to divert the discharges that are allowed through the S-12s away from the subpopulation about which the FWS is most concerned at this time. We fully support any attempts to reduce water levels in WCA 3A by means that would not adversely affect seaside sparrow nesting success. If sufficient data exist, we would also support hydrological modeling to evaluate the possibility of increasing flows through S-12C and D without significantly increasing water levels in sparrow habitat during the breeding season. If the modeling efforts demonstrate that this may be possible, we recommended that the S-12D and then S-12C structures be opened incrementally while the hydrological conditions within the nesting area of the sparrow subpopulation is monitored.

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Section 2.10: Termination of the Emergency Actions

The FWS has recently clarified their desire not only to provide for successful breeding this year, but also a concern that continued dry-season flooding would irrevocably change the vegetation community to one incompatible with the narrow habitat tolerance of the sparrow. Should the EA be expanded to take this issue into consideration, we anticipate that the termination date for emergency actions would be the beginning of the rainy season, regardless of whether there were sparrows nesting in western Shark River Slough this year. Under normal wet-season conditions, we anticipate that this action would have severe consequences in the WCAs. Even fully opened, the capacity of the S-12s to lower water in WCA 3A is limited, and observations during the 1994-1995 high-water events have shown that if high water levels are maintained through the dry season, then the water levels in WCA 3A remain excessively high during the following wet season, thereby reducing the overall storage capacity of the WCA. Not only would this situation exacerbate recent damage to the remaining native upland communities in WCA 3A, but it also sets the stage for a reenactment of the current emergency.

We reiterate our suggestion of using the trigger conditions outlined by the first condition that we recommended regarding section 2.07. Further, we would fully support working this year with the COE and other Southern Everglades Restoration Alliance (SERA) sponsors to develop more effective means to protect and improve the quality of existing sparrow habitat by revisiting the current regulation schedules for the WCAs and, possibly, Lake Okeechobee. With the physical constraints that currently exist in the system, the most reasonable approach to protecting sparrow habitat in western Shark River Slough would be to develop a schedule that would provide more capacity for wet-season rainfall, thereby reducing the need to make late dry-season discharges through the S-12A and B, and to redirect the path of northern Shark River Slough to the east, thereby lessening dependence on the S-12s to convey water southward into the park.

We look forward to working with you and your staff to minimizing both the impacts to the Cape Sable seaside sparrow and the biological diversity of the Everglades.

Sincerely,



Allan L. Egbert, Ph.D.
Executive Director

ALE/MP/SC
ENV 2-16/11

cc: Mr. Ernie Barnett, FDEP
Mr. Steve Forsythe, FWS